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10/663,240

09/16/2003

D. Ridgely Bolgiano

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EXAMINER

WILSON, ROBERT W

ART UNIT

PAPER NUMBER

2619

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/663,240	Applicant(s) BOLGIANO ET AL.	
	Examiner ROBERT W. WILSON	Art Unit 2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,6 and 34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 September 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/17/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. The examiner reviewed the drawing and could not find a drawing which supported the following claim limitations:

“receiving the second spread spectrum signal at the plurality of antennas and determining the subscriber unit’s location using the determined plurality of time differences” as specified in claim 1?

“control device and CDMA transmitter configured to determine a plurality of timing differences between the first plurality of spread spectrum signals and transmit a second spread spectrum signal having an associated code with a code phase based on at least on the first plurality of received spread spectrum signals wherein the second spread spectrum signal indicates the determined plurality of timing differences” as specified in claim 6.

“transmitting a second spread spectrum signal having an associated code with a code phase based on at least one of the plurality of received spread spectrum signal wherein the second spread spectrum signal indicates the determined plurality of timing differences” as specified in claim 34.

Therefore, the limitations in claims 1, 6, & 34 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the

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drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schilling (U.S. Patent No.: 5,881,094) in view of Riaz (Time Division Duplex Transmission of Direct Sequence Spread Spectrum Signals in Multipath Channels which is an IDS document of record; henceforth, referred to as Riaz further in view of Darnell (U.S. Patent No.: 5,043,736)

Referring to claim 1 Schilling teaches, A method for locating a subscriber user (method for locating a wireless user (subscriber unit) per col. 8 lines 35 to 50), the method comprising:

transmitting from an antennas a first spread spectrum signal having an associated code (Base Station transmits from a single antenna per Fig 1 a CDMA spread spectrum (first signal) which has an inherent code per col. 8 lines 36 to 50)

receiving the first spread spectrum signal at the subscriber unit (The wireless user (subscriber unit) receives the CDMA spread spectrum (first signal) per col. 8 lines 36 to 50)

transmitting a second spread spectrum signal having an associated code with a code based on at least of the received first signals from a subscriber unit wherein the second spread spectrum signal indicates a time difference (The wireless unit (subscriber unit) sends a repeat of the first

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signal with a timing mark signal which is used to determine the time difference to the base station per col. 8 lines 35 to 50)

receiving the second spread spectrum signal having an associated code having a same phase as that received from the first spread spectrum signal (The remote unit (wireless user) repeats the same signal back to the base station which receives a second signal on a single antenna. The repeated signal will inherently have the same phase as the first signal because the signal is repeated per col. 8 lines 36 to 50)

determining the subscriber unit's location using the determined time difference (distance is determined between the remote unit (wireless user) and the antenna on the base station based upon sending a timing or a mark signal or time difference per col. 8 lines 35 to 50 35 to 50)

Schilling does not expressly call for: plurality of antenna or determining a plurality of time difference

Riaz teaches: utilizing a plurality of antennas (employing more than one antenna at a base station per Para 1 per Pg 1572 to Para 2 Pg 1573)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the plurality antennas of Riaz to the base station of Schilling in order to perform diversity processing which will improve the performance of a CDMA system in a fading environment.

The combination of the Schilling and Riaz do not expressly call for: determining a plurality of time difference

Darnell teaches: determining a plurality of time difference per col. 3 lines 38 to 60

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the plurality of time difference of Darnell in place of the time difference of the combination of Schilling and Riaz in order to more accurately determine the location of the wireless unit or subscriber unit.

4. Claim 6 & 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darnell (U.S. Patent No.: 5,043,736) in view of Schilling (U.S. Patent No.: 5,881,094)

Referring to claim 6, Darnell teaches: A subscriber unit capable of being located, the wireless user (wireless user or subscriber units being able to determine location per col. 8 lines 35 to 50) the subscriber user comprising:

A code division multiple access (CDMA) receiver configured to receive a first plurality of spread spectrum signals transmitted from a plurality of antennas (30 per Fig 4 is a receiver which receives a plurality of pseudo code or spread spectrum signals from a plurality of satellites each of which has an antenna or plurality of antennas per Fig 1)

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A control device and a CDMA transmitter configured to determine a plurality of timing differences between the first plurality of spread spectrum signals and transmit a second signal which indicates the determined plurality of timing differences (Remote unit has a CPU (34) and a cellular transmitter (46) per Fig 4 which sends a plurality of timing difference data which is encoded into position data which is send to the base station per col. 3 lines 5 to 30)

Darnell does not expressly call for: a spread spectrum signal having an associated code and the phase based on at least one of the received signals

Schilling teaches: a spread spectrum signal having an associated code and the phase based on at least one of the received signals(Repeat the same CDMA signal back to the base station which will inherently have the same phase as the first signal per col. 8 lines 36 to 50)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the spread spectrum signal having the same phase of Schilling in place of the transmitted cellular signal of Darnell because CDMA is used in cellular communication and using one the same CDMA as was received from the satellite link would make the cellular received and transmitter in the remote unit more reliable and easier to build by using CDMA for both GPS and cellular links.

Referring to claim 34, Darnell teaches: a method for use in a subscriber unit for enabling location of the subscriber unit (wireless user or subscriber units being able to determine location per col. 8 lines 35 to 50) the subscriber user comprising:

Receiving a first plurality of spread spectrum signals transmitted from a plurality of antennas (Remote unit receives a first plurality of pseudo code or spread spectrum signals from a plurality of satellites each having an antenna per Fig 4 and per col. 3 line 37 to col. 4 line 4)

Determining a plurality of timing differences between the first plurality of spread spectrum signals (The remote unit or subscriber units determines the difference in time of timing difference per col. 3 line 37 to col. 4 line 4)

Transmitting a second signal based on the plurality of received spread spectrum signals (The remote unit or subscriber unit transmits a difference in time signal to the base station per col. 3 line 37 to col. 4 line 4)

Darnell does not expressly call for: a spread spectrum signal having an associated code e based on at least one of the received signals

Schilling teaches: a spread spectrum signal having an associated code based on at least one of the received signals (Repeat the same CDMA signal back to the base station per col. 8 lines 36 to 50)

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It would have been obvious to one of ordinary skill in the art at the time of the invention to add a spread spectrum signal having an associated code based on at least one of the received signals of Schilling in place of the transmitted cellular signal of Darnell because CDMA is used in cellular communication and using one the same CDMA as was received from the satellite link would make the cellular received and transmitter in the remote unit more reliable and easier to build by using CDMA for both GPS and cellular links.

Response to Amendment

5. Applicant's arguments with respect to claims 1, 6, & 34 have been considered but are moot in view of the new ground(s) of rejection.

Additionally the examiner provides the follow response to the applicants remarks/arguments:

The examiner respectfully disagrees with the applicant's argument that the applicant or applicant's attorney make the determination as to whether a drawing is required to show all of the limitations of the claimed invention. The MPEP specifically provides the examiner with the authority to require drawings.

The examiner respectfully disagrees with the applicant's argument that applicant's specification paragraphs [0062], [0110], [0111], [0115], & [0121] provide support for the following claim limitations:

“receiving the second spread spectrum signal at the plurality of antennas and determining the subscriber unit's location using the determined plurality of time differences” as specified in claim 1.

“control device and CDMA transmitter configured to determine a plurality of timing differences between the first plurality of spread spectrum signals and transmit a second spread spectrum signal having an associated code with a code phase based on at least on the first plurality of received spread spectrum signals wherein the second spread spectrum signal indicates the determined plurality of timing differences” as specified in claim 6.

“transmitting a second spread spectrum signal having an associated code with a code phase based on at least one of the plurality of received spread spectrum signal wherein the second spread spectrum signal indicates the determined plurality of timing differences” as specified in claim 34.

The applicant's specification paragraphs [0012] & [0016] through [0019] provide support for the receiving station to determine location from time arrival data but provide no support for the feedback or second spread spectrum signal which is created. The applicant's originally filed claims 1- 6 are the only support for the second spread spectrum signal; thus, applicant is entitled

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to the filing date of this patent for claimed priority for the limitations set for in this application and thus and this application is a CIP and not a division!

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT W. WILSON whose telephone number is (571)272-3075. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571/272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert W Wilson/
Primary Examiner, Art Unit 2619

RWW